

Feeding Activity of *Mylabris pustulata* Thunb. (Coleoptera: Meloidae)

Mylabris pustulata is a serious pest of malvaceous plants. Several workers, such as CHIN¹, NAYAR and FRAENKEL², HSIAO and FRAENKEL³ and others have worked on the feeding behaviour of phytophagous coleopteran pests, which infect a large number of important crops. But no comprehensive work seems to have been done on the feeding behaviour of the insects in the family Meloidae. SRIVASTAVA and SRIVASTAVA⁴ have worked on the feeding habits and digestion in *Mylabris phalerata* Pall. SHUKLA and UPADHYAYA⁵ have studied the relative food preference of *Mylabris pustulata* (Thunb.). The present communication deals with the comprehensive study of the feeding activity of this insect on malvaceous plants.

H. rosasciensis plants in general and their flowers in particular, in light as well as in dark. The difference in mean number fed towards *H. rosasciensis* is statistically significant at 1% level of probability, both in light and in dark, from those of *H. esculentus* and *S. caeveronifolia*. *H. rosasciensis* exercises also the highest attraction for these insects.

The feeding preference towards *H. rosasciensis* clearly indicates the location of strong chemical attractants, incitants and stimulants in this plant which serve as factors in the feeding activity. It is interesting to note that the insects feed only on the coloured petals of the flowers, i.e. the corolla including the pollen tube with all

Table I. Feeding activity of *M. pustulata* with different host plants in light

Test material	Mean No. of insects	Difference from previous mean	Value of <i>t</i> when <i>n</i> = 27	Ed × t	F
<i>H. rosasciensis</i>	5.392				2.3
<i>H. esculentus</i>	1.193	4.199 ^a	2.576 at 1% level	1.24	
<i>S. caeveronifolia</i>	0.513	0.680	2.052 at 5% level	0.99	

^aSignificant at 1% level

Table II. Feeding activity of *M. pustulata* with different host plants in dark

Test material	Mean No. of insects	Difference from previous mean	Value of <i>t</i> when <i>n</i> = 27	Ed × t	F
<i>H. rosasciensis</i>	5.12				9.5
<i>H. esculentus</i>	1.24	3.88 ^a	2.576 at 1% level	1.73	
<i>S. caeveronifolia</i>	0.35	0.89	2.052 at 5% level	1.38	

^aSignificant at 1% level

Materials and method. Adults of *M. pustulata* of mixed age and sex were collected from the fields and used in this experiment. To determine the feeding activity of this insect on various parts of the plants, 25 normal individuals were released inside a feeding chamber (SHUKLA and UPADHYAYA⁶) at its centre. In order to determine the amount of food ingested by this insect, 8 g of material from 3 malvaceous plants (*Hibiscus rosasciensis*, *Hibiscus esculentus*, *Sida caeveronifolia*) were kept at the periphery of the chamber. The test materials were placed equidistantly in a random fashion along the periphery of the chamber. A control was arranged in the same fashion to determine the loss of water by evaporation from the plants. The experiment was run for a period of 8 h. At the end of this time, the materials were taken out and the faecal matters were carefully removed by camel hair brush. The control test materials were again weighed separately and the loss of water due to evaporation was determined. The experimental test materials were also weighed and the loss of weight by feeding was calculated by subtracting the water loss. The experiment was replicated 10 times and the differences in the ingestion of food were statistically analyzed. The experiment was conducted both in light and in dark at room temperature ranging from 20–25°C.

Results and discussion. Studies on the feeding activity of *M. pustulata* as shown in Tables I and II, reveal that these insects show greater feeding activity towards

its contents. In nature therefore the flowers are damaged by this pest.

Résumé. L'activité nutritive de *M. pustulata* Thunb. est en général plus intense sur les plantes d'*Hibiscus rosasciensis* et sur ses fleurs particulier, à la lumière aussi bien que dans l'obscurité. La lumière ne joue donc pas de rôle important dans l'alimentation de cet insecte.

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